

# Advanced Robotics

Apply safety principles, practices, philosophy, and guidelines to the work environment. [STS.HS.5.1](#)

- a** Complete applicable safety assessment with 100% accuracy. [STS.HS.5.1.A](#)

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- b** Employ eye protection in compliance with Neb. Rev. Statute 79–715. [STS.HS.5.1.B](#)

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- c** Employ appropriate Personal Protective Equipment (PPE) while in the lab setting. [STS.HS.5.1.C](#)

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- d** Employ the safe application of tools and machines. [STS.HS.5.1.D](#)

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- e** Explain the main hazards that are possible in the lab setting. [STS.HS.5.1.E](#)

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- f** Demonstrate proper handling and storing of materials. [STS.HS.5.1.F](#)

Identify careers in robotics. [STS.HS.5.2](#)

- a** Identify robotics industry vocabulary. [STS.HS.5.2.A](#)

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- b** Identify the responsibilities of robotics professionals. [STS.HS.5.2.B](#)

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- c** Identify the education, certification, or licensure required in a robotics-related career. [STS.HS.5.2.C](#)

Create a robotic solution (physical or simulated), using a formal engineering design process, to solve an existing problem. [STS.HS.5.3](#)

- a** Demonstrate authentic engineering methods and documentation. [STS.HS.5.3.A](#)

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- b** Apply task-specific mathematical concepts. [STS.HS.5.3.B](#)

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- c** Apply task-specific scientific concepts. [STS.HS.5.3.C](#)

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- d** Explain each step of the design process. [STS.HS.5.3.D](#)